# *Epidemiologic Profile*

HIV/AIDS

*in*

# San Luis Obispo County, CA

**San Luis Obispo County Public Health Department**
**AIDS Program**

**June, 2004**

# San Luis Obispo County
# Public Health Department

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# Introduction

This report is an Epidemiologic Profile of HIV/AIDS in San Luis Obispo County, California. Although the report is through June 30th, 2004, it covers the AIDS epidemic from its beginning in San Luis Obispo in 1984. An Epidemiologic Profile attempts to describe a disease, in this case HIV/AIDS, in terms of its occurrence, transmission, and impact. In compiling this report, the San Luis Obispo County Public Health Department is following guidelines suggested by the Centers for Disease Control and Prevention (CDC) to develop an Epidemiologic Profile for HIV prevention and community planning. The three key components of the profile are:

1. What are the sociodemographic characteristics of the population?

2. What is the impact of HIV/AIDS on the population?

3. Who is at risk for becoming infected with HIV?

Due to the relatively small population of San Luis Obispo County, and the correspondingly small numbers of HIV/AIDS cases throughout the County, geographic distribution of cases will be aggregated to areas such as zip codes if appropriate.

In reporting HIV/AIDS, it is important to understand some key concepts. Incident cases are those that are newly occurring, in other words, cases just discovered. Prevalent cases are those existing at any given time in the County. For example, there might be 15 incident cases of HIV/AIDS per year in a County, but 200 prevalent cases. The prevalent cases would be a combination of the newly occurring cases, and those already existing within the community. The prevalence of HIV has increased since 1996 with the introduction of Highly Active Anti-retroviral Therapy (HAART). HAART treatment helps halt the replication of the HIV virus in the body and kill existing virus in the body, thereby decreasing viral load and slowing the progression to AIDS for those with HIV infection. Before 1996, an estimate of newly occurring HIV infection could be made from back-calculation of mortality rates due to AIDS. Since then, the number of AIDS cases and mortality rates due to AIDS have fallen dramatically. All estimates of new HIV infection today are less reliable than prior to 1996, but the CDC estimates that approximately 40,000 new cases of HIV infection occur per year in the United States. Before 2002, AIDS was a reportable disease in the State of California, however, HIV was not. As of July 2002, HIV infection became a reportable condition. Reporting by physicians however, is highly variable. Much of the data regarding HIV testing in this report comes from the Public Health Department's own testing. HIV has only been reportable for a relatively short period of time, so data may be misleading. HIV statistics, although presented in this report, most likely represent an under-reporting of the true burden of HIV morbidity within the County.

# Data Sources and Limitations

When reviewing this report, please keep in mind the following:

1. The data included reflects only those HIV and AIDS cases reported to the San Luis Obispo County Public Health Department AIDS Program, by private physicians, laboratories, and State Institutions. It is not considered reflective of the total number of cases of HIV and/or AIDS, as there are undetected and unreported cases in the community. The data only reflects current reporting practices.

2. A significant portion of the HIV/AIDS cases in San Luis Obispo County are housed in State Institutions within the County borders. These Institutions are for male inmates only. These cases are reported to the California Department of Health Services office of AIDS Surveillance, and then relayed back to San Luis Obispo County. There is a subsequent lag in reporting for some cases. As a result of the distinct differences in community vs. institutional reported cases, where possible, the data in this report is separated out into institution vs. community cases. State statistics regarding cumulative AIDS incidence within the County for all cases of AIDS, both institutional and community use a denominator of the County's population, not incarcerated persons. To remain consistent with the State statistics, the County's population is used when calculating Cumulative Incidence rates, not the County's incarcerated population.

3. HIV reporting in the State and County is not as representative of the total HIV+ population as is AIDS reporting for the AIDS population. The CDC estimates that at least 1/3 (one-third) of persons in the US infected with the HIV virus are unaware of their infection, as they have not been tested.

4. HIV/AIDS cases are counted in the County and State of residence at the time of diagnosis. Therefore, San Luis Obispo County figures do not reflect HIV/AIDS cases diagnosed out of this County who subsequently moved to San Luis Obispo County.

5. Due to confidentiality issues, when a category of persons being reported would result in a small number of cases, categories were collapsed to protect confidentiality. For example, some racial categories were collapsed to "Other" in tables, while some Community data was collapsed to Zip Codes. This condensation of data is done to protect confidentiality only, and is not meant to show any greater or lesser significance placed on any demographic or geographic group.

6. The diagnostic criteria for reporting AIDS has changed several times during the course of the epidemic, and as a consequence, trends in reporting have changed over time. Specifically, changes in 1985, 1987 and 1993 led to increases in the number of cases being reported. Thus, increases in AIDS rates subsequent to those years did not necessarily reflect an increase in transmission of the virus, merely diagnosis.

7. HIV reporting since July of 2002 is not considered a true reflection of incident cases of HIV. Many of the cases reported since HIV became a reportable condition are reflective of the prevalent cases within the community. Once more data is available, better projections regarding HIV incidence within the County can be made.

8. Some numbers of reported cases and deaths by year has changed since the 2003 edition of this report. These changes are in large part due to a comprehensive review by the State of California of all AIDS cases and deaths by jurisdiction, which has resulted in a re-allocation of some cases and deaths by jurisdiction. The overall changes resulted in fewer than 10 changes by year of cases or deaths by year.

# Demographic Characteristics of San Luis Obispo County

San Luis Obispo County is located on the Central Coast of California, approximately 230 miles south of San Francisco and 200 miles north of Los Angeles. The County covers 3,316 square miles, and according to the California Department of Finance estimates, has a population of 253,600 as of January 2002[1]. San Luis Obispo ranks 34th out of 58 counties in population size, that is, 33 counties have smaller populations than San Luis Obispo County. The population density is 76 persons per square mile, but much of the population is in distinct clusters, primarily along the main north-south highway running through the County (US 101). The population grew approximately 13.6% between 1990 and 2000. The majority of the County is agricultural, with 61.6% of the land area devoted to farming.

According to the 2000 census, San Luis Obispo County has a population that is 76% white, 16.3% Hispanic, 2.5% African-American, 2.9% Asian, and 2.2% comprised of other categories, including Native American, Alaskan Native and Pacific Islander. 15% of the population is above the age of 65, while approximately 35% is below the age of 24. The median family income is $50,000, which is slightly greater than the California median income of $46,000. It is estimated that 15.8% of the County's population below the age of 18 live below the poverty level, as compared to 20.2% state-wide[2].

San Luis Obispo County's demographic distribution is somewhat different from the state. Although the gender distribution is similar between the County and the State, the racial and age demographics vary slightly. San Luis Obispo County is considerably less heterogeneous in its racial make-up than the state, with over three-quarters (3/4) of the County's population classifying themselves as white, non-hispanic, according to the 2000 Census. The County has also attracted a significant retirement population, with almost one-quarter (1/4) of the population 55 years or older. California as a whole has a slightly younger population distribution.

San Luis Obispo County's economy is considered strong, with an average unemployment rate per year of 3.4%, and a rate of 3.3% for the month of June 2004[3]. The government is the County's largest employer (Federal, State and local), followed by PG &E and healthcare organizations. The County has several large institutions which contribute to area employment, including California Polytechnic State University, California Men's Colony (prison), Atascadero State Hospital, Diablo Canyon Nuclear Power Plant, and two military sites. The economy is also dependent on tourism, a major industry in the region. The County is home to over 80 vineyards and other agricultural concerns. Overall, there is a strong mix of civil service, private industry and agriculture contributing to the economic and demographic makeup of the County. Some of the demographic characteristics of the County are detailed in Table 1.1.

Table 1.1
San Luis Obispo County Population by Gender, Race and Age*

| San Luis Obispo County Population by Gender, Race and Age | | | | California Population by Gender, Race and Age |
|---|---|---|---|---|
| Description | Number | % of Population | | % of Population |
| **Gender** | | | | |
| Male | 126,704 | 51.36% | | 49.8% |
| Female | 119,977 | 48.64% | | 50.2% |
| **Race** | | | | |
| White, Non-Hispanic | 187,840 | 76.15% | | 46.7% |
| Hispanic | 40,196 | 16.29% | | 32.4% |
| Black | 5,995 | 2.43% | | 7.4% |
| Asian | 7,140 | 2.89% | | 12.3% |
| Other | 5,510 | 2.23% | | 1.2% |
| **Age** | | | | |
| <5 | 12,358 | 5.01% | | 7.3% |
| 5-14 | 31,086 | 12.60% | | 15.6% |
| 15-24 | 43,540 | 17.65% | | 14.2% |
| 25-34 | 28,177 | 11.42% | | 15.4% |
| 35-44 | 38,416 | 15.57% | | 16.2% |
| 45-54 | 36,150 | 14.65% | | 12.8% |
| 55-64 | 21,269 | 8.62% | | 7.7% |
| 65+ | 35,685 | 14.47% | | 10.7% |
| Total | 246,681 | 100.00% | | 99.9% |

* Source: 2000 US Census

Although the population density is 76 persons per square mile, most of the population lives in several large cities or unincorporated regions, the largest of which is the County seat, the city of San Luis Obispo. The 10 largest population centers are shown in Table 1.2.

The County has four hospitals, two of which are located within the city of San Luis Obispo. One hospital is located in Templeton, which serves the majority of the North County population, and a fourth hospital is located in Arroyo Grande, in South County, where there is a large cluster of retired persons.

Table 1.2 Population by City and Region
Tracked by US Census*

| Population by City/Region | | |
|---|---|---|
| **City/Region** | **Number** | **% of Population** |
| San Luis Obispo | 44,174 | 17.91% |
| **North County** | | |
| Paso Robles | 40,493 | 16.42% |
| Atascadero | 26,411 | 10.71% |
| Templeton | 4,687 | 1.90% |
| **South County** | | |
| Arroyo Grande | 15,851 | 6.43% |
| Nipomo | 12,626 | 5.12% |
| Grover Beach | 13,067 | 5.30% |
| Pismo Beach | 8,551 | 3.47% |
| Oceano | 7,260 | 2.94% |
| **North Coast** | | |
| Morro Bay | 10,350 | 4.20% |
| Los Osos | 14,351 | 5.82% |
| **Total** | 197,821 | 80.19% |

* This 80% of the County population only represents the 10 largest population concentrations in the County.

# HIV/AIDS in San Luis Obispo

The first case of AIDS in San Luis Obispo County was reported in 1984. By June 1997, 405 cases had been reported, and to date, 536 cases have been reported. This represents an increase from 175.12 cases per 100,000 in 1998, to an overall cumulative incidence rate (CIR) of 216.1 per 100,000 as of July 1, 2004. Cumulative Incidence, by definition, is a measure of cases occurring over time, and thus will always increase, as long as an epidemic continues. San Luis Obispo County is home to a large incarcerated population, with three State institutions, CMC, ASH and Paso de Robles Boys School. These institutions, CMC in particular, have greatly increased the overall numbers of HIV/AIDS cases within the County. The Cumulative Incidence Rate (CIR) for the community population is 102.9, while the institutional population has a CIR of 112.5. This is based on the County's overall population. Table 2.1 shows the Cumulative Incidence Rate for San Luis Obispo County and selected comparison populations.

Table 2.1 AIDS case cumulative Incidence Rates for selected populations

| | Incidence Rate (per 100,000) through May 1999 | Incidence Rate (per 100,000) through May 31, 2004 |
|---|---|---|
| California | 337.7 | 400.4 |
| San Luis Obispo (all cases)[1] | 170.1 | 216.1 |
| SLO Institutional[2] | | 112.5 |
| SLO Community | | 102.9 |
| Santa Barbara County | 150.4 | 181.8 |
| Monterey County | 187.2 | 213.8 |

Source: California Dept. Of Health Services, Office of AIDS, HIV/AIDS Surveillance Report and San Luis Obispo County AIDS Program

1 All cases in San Luis Obispo County, both community and institutional

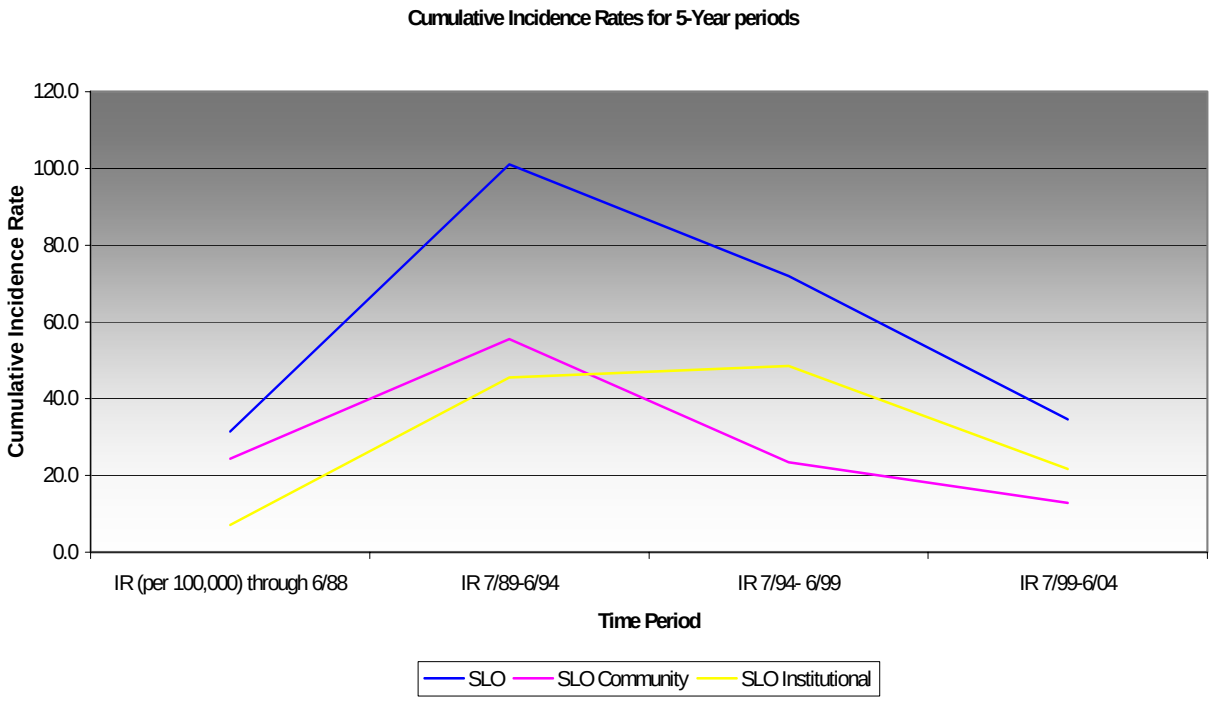
2 The institutional population IR uses a denominator of the overall population of San Luis Obispo County, not solely the institutionalized population

Between 1999 and 2004, the cumulative IR for San Luis Obispo County rose by 46 cases per 100,000. This was less than the cumulative IR increase for all of California (62.7), but more than our neighboring counties of Santa Barbara and Monterey (31.4 and 26.8, respectively). It can be seen however, that the CIR for Institutional patients is higher than that of the community cases, leading to the conclusion that the institutional population is skewing the overall SLO numbers higher. Although the number of new HIV cases occurring per year has been hypothesized to have remained steady over that period, the progression to AIDS has slowed due to the introduction of HAART therapy in 1996.

In order to gather a more accurate picture of the frequency of AIDS cases occurring, a CIR of AIDS was calculated for five-year periods throughout the epidemic, and the data presented in Figure 1. This graph shows that the five-year period CIR's for AIDS increased rapidly in the beginning of the AIDS epidemic, but has been slowing e as a result of the introduction of HAART therapy, most dramatically in the community population. In this graph, trends in AIDS incidence can be seen going up until 1998, but

after HAART therapy, AIDS incidence has been falling. AIDS incidence is no longer temporally correlated with HIV infection, so no conclusions can be drawn about present day HIV infection. The CDC however, has estimated that incident HIV infections per year have remained somewhat steady throughout the 1990's and into the new millennium, with approximately 40,000 new infections every year.

Figure 1




# Affected Populations

***Race***

The ethnic distribution of AIDS in San Luis Obispo County differs from the ethnic distribution of the population overall. Table 3.1 contains data showing the racial distribution of AIDS cases within the County. For instance, although African Americans represent only 2.4% of the population in San Luis Obispo, 27.6% of all AIDS cases in the County are African-Americans. This reflects trends in HIV/AIDS data, with African Americans representing the ethnic group with the highest rate of new cases. The majority of the African-American cases in San Luis Obispo County however, are occurring in the incarcerated population. In Figure 2.1, the racial distribution of AIDS cases for the State, San Luis Obispo County Community and San Luis Obispo County Institutional cases are shown. This figure demonstrates that the African-American Institutional population of San Luis Obispo County is significantly over-represented as a percentage of overall AIDS cases, even when compared to the entire State population. By viewing both Table 3.1 and Figure 2.1, the difference in demographic distribution of cases between

community and institutional cases can be easily ascertained. The ethnic distribution of AIDS in community cases more closely follows the overall ethnic distribution of the County.

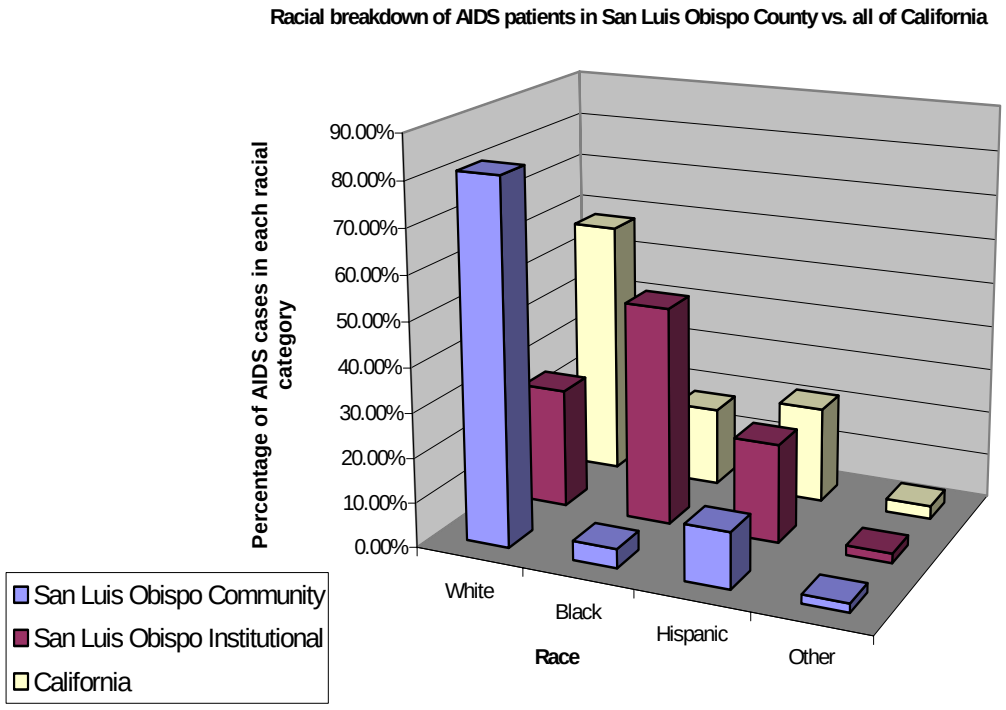
Table 3.1 Racial breakdown of AIDS cases in San Luis Obispo County and California expressed as a percentage of cases

| Race | San Luis Obispo (All cases)[1] | San Luis Obispo Community | San Luis Obispo Institutional | California |
|---|---|---|---|---|
| White | 53.0 % | 81.3 % | 26.8 % | 58.0 % |
| Black | 28.4 % | 4.3 % | 48.9 % | 17.7 % |
| Hispanic | 17.1 % | 12.5 % | 22.1 % | 21.6 % |
| Other | 1.5 % | 2.0 % | 2.1 % | 3.0 % |

Source: California Dept. Of Health Services, Office of AIDS, HIV/AIDS Surveillance Report and San Luis Obispo County AIDS Program

1. Representing the combined category of institutional and community cases

Figure 2.1

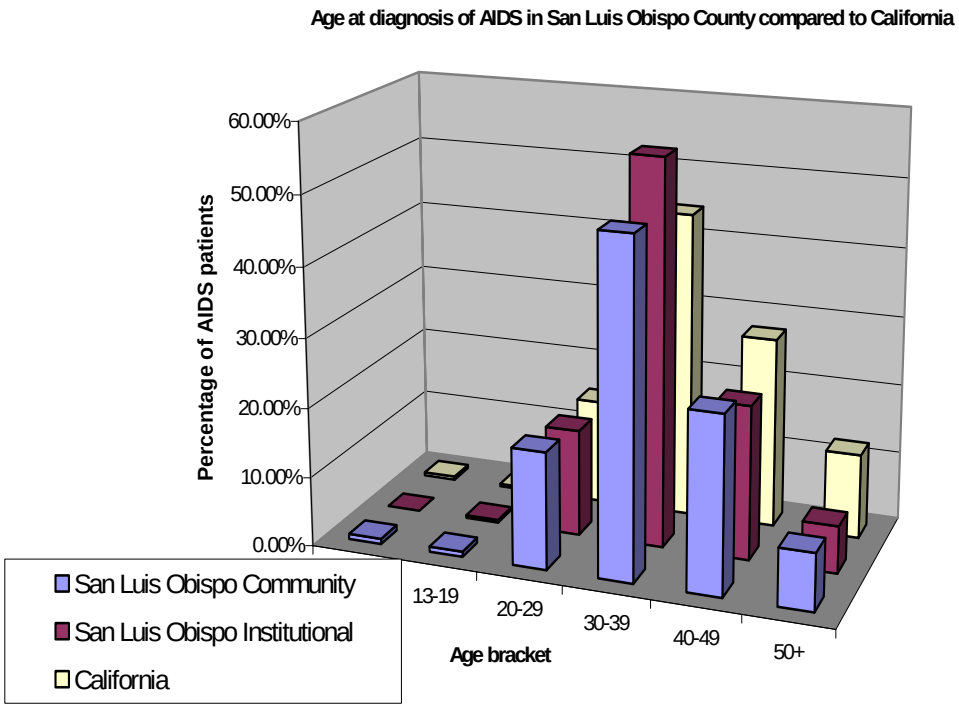



***Age***

The majority of AIDS cases within the County are diagnosed in 30-39 year olds, across all populations, including the San Luis Obispo Community, Institutional, and California population. Figure 2.2 shows a graph of the age distribution of AIDS patients in all three of these populations. It should be noted however that all cases in the institutional

category are male, while the California and San Luis Obispo Community populations are comprised of both males and females.

Figure 2.2




***Gender***

Because San Luis Obispo County has such a large, male-only institutional population, it is important to look at the community and institutional cases separately in order to truly understand the impact of AIDS on specific genders. In the San Luis Obispo County community population, 228 males have been diagnosed with AIDS, while 28 females have. Thus, approximately 11% of community AIDS cases occur in females within the County, which is higher than the state rate of 5.2%. However, State statistics do not differentiate between community and institutionalized populations. Identified risks for HIV transmission vary by gender within the community, as shown in Table 3.2 below. For females, Heterosexual Contact is the largest risk factor (50.0%), followed by Intravenous Drug Use (IDU). For community males, men who have sex with men (MSM) is by far the highest risk category, followed by the combined MSM/IDU category.

In institutionalized males, the trends vary somewhat in that IDU is the highest risk factor for acquiring AIDS. These results are shown in Table 3.3. The next highest risk factors are MSM/IDU and MSM. The table shows that risks are more evenly distributed among the top three risks factors in the institutional cases, while in the community MSM is by far the greatest risk factor.

Table 3.2: Exposure categories* by gender for all Community AIDS cases in San Luis Obispo County

| Exposure / Mode of Transmission | Males (n = 228) | | Females (n=28) | |
|---|---|---|---|---|
| | # of Cases | % of Cases | # of Cases | % of Cases |
| Male-to-male Sexual contact(MSM) | 151 | 66.2 % | 0 | 0 |
| Injection drug use (IDU) | 16 | 7.0 % | 10 | 35.7 % |
| MSM + IDU | 46 | 20.2 % | 0 | 0 |
| Hemophilia | 4 | 1.4 % | | |
| Heterosexual Contact | 2 | 0.9 % | 14 | 50.0 % |
| Transfusion | 4 | 1.4 % | 2 | 7.1 % |
| Undetermined | 5 | 2.2 % | 2 | 7.1 % |
| Total | 228 | 100.0 % | 28 | 100 % |

Source: California Dept. Of Health Services, Office of AIDS, HIV/AIDS Surveillance Report and San Luis Obispo County AIDS Program

*This list does not include all exposure categories. Categories with small numbers have been omitted.

Figure 2.3

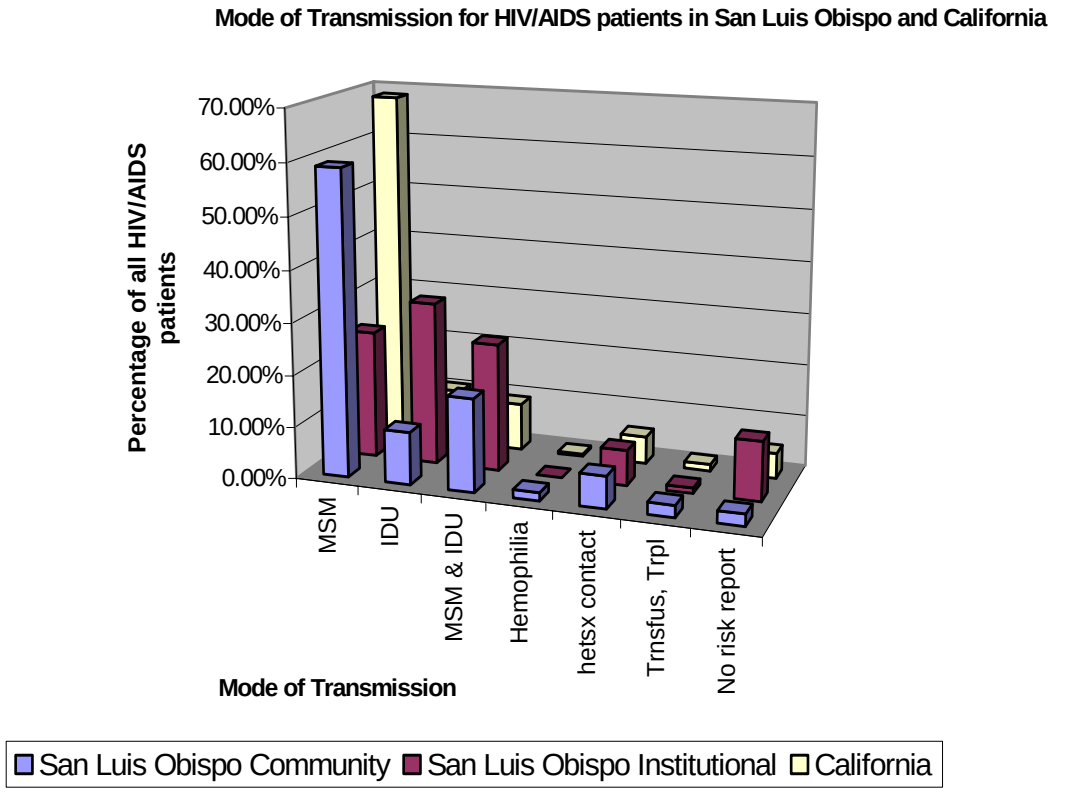


Table 3.3 Exposure categories for Institutional AIDS cases[1] in San Luis Obispo County

| Exposure / Mode of Transmission | # of Cases | % of Cases |
|---|---|---|
| Male-to-male Sexual contact(MSM) | 69 | 24.6 % |
| Injection drug use (IDU) | 88 | 31.4% |
| MSM + IDU | 69 | 24.6 % |
| Hemophilia | 0 | 0 % |
| Heterosexual Contact | 19 | 6.8 % |
| Transfusion | 3 | 1.1 % |
| Undetermined | 32 | 11.4 % |
| Total | 280 | 100 % |

Source: California Dept. Of Health Services, Office of AIDS, HIV/AIDS Surveillance Report and San Luis Obispo County AIDS Program

1. All institutional cases are males

Combining the MSM and MSM+IDU categories to reveal total risk to gay/bisexual men shows similar rates of exposure between San Luis Obispo Community cases and California cases at 86.3% and 84% of AIDS cases, respectively. For the institutional population, IDU is the greatest risk factor, with 31.4% of the cases reporting that as their only risk factor, but 56.1% reporting it as one of their possible risk factors. In the community, a combined 26.0 % of cases listed IDU as a risk.

## Deaths due to AIDS

Prior to the introduction of HAART, the AIDS case-fatality rate was very high, reaching 100% in some years. The case-fatality rate is the percentage of persons dying who have contracted a disease. As progression to AIDS has slowed, so has the case-fatality rate amongst AIDS patients. Table 3.4 shows the number of AIDS cases diagnosed by year for both community and institutionalized cases, and the case-fatality rate by year. The total case-fatality rate is 44.2%. Note that the cumulative community case-fatality rate of 69.4% is somewhat higher than the institutional case-fatality rate of 30.4%. The explanation for this is not known, although loss to follow up within the prison system could account for some of the difference. The difference in access to care between Community and incarcerated populations could also be a factor.

When looking at the leading cause of death in San Luis Obispo County, AIDS is not one of the 10 leading causes of death for the period of 1999-2004. Because coding for the classification of diseases changed in 1999, it is impossible to compare the years prior to 1999 to years occurring after. Thus, the snapshot we have now shows low AIDS mortality, but the case-fatality data in Table 3.4 shows that this was not always the case.

| Table 3.4 San Luis Obispo County AIDS Cases by Year of Diagnosis and Deaths by Year | | | | | | |
|---|---|---|---|---|---|---|
| | Community Cases | | Institutional Cases | | Total Reported Cases and Deaths | |
| | Cases | Deaths | Cases | Deaths | Cases | Deaths |
| Year | | | | | | |
| 1983 | 1 | 1 | 0 | 0 | 1 | 1 |
| 1984 | 2 | 2 | 1 | 1 | 3 | 3 |
| 1985 | 6 | 6 | 1 | 1 | 7 | 7 |
| 1986 | 5 | 4 | 1 | 0 | 6 | 4 |
| 1987 | 7 | 6 | 2 | 1 | 9 | 7 |
| 1988 | 15 | 12 | 6 | 5 | 21 | 17 |
| 1989 | 12 | 12 | 3 | 3 | 15 | 15 |
| 1990 | 18 | 16 | 6 | 6 | 24 | 22 |
| 1991 | 22 | 16 | 19 | 15 | 41 | 31 |
| 1992 | 33 | 24 | 22 | 12 | 55 | 36 |
| 1993 | 27 | 19 | 33 | 14 | 60 | 33 |
| 1994 | 22 | 15 | 20 | 8 | 42 | 23 |
| 1995 | 10 | 4 | 32 | 7 | 42 | 11 |
| 1996 | 19 | 4 | 36 | 7 | 55 | 11 |
| 1997 | 10 | 2 | 20 | 1 | 30 | 3 |
| 1998 | 9 | 3 | 10 | 1 | 19 | 4 |
| 1999 | 6 | 1 | 14 | 1 | 20 | 2 |
| 2000 | 6 | 2 | 24 | 0 | 30 | 2 |
| 2001 | 11 | 2 | 10 | 1 | 21 | 3 |
| 2002 | 9 | 1 | 12 | 1 | 21 | 2 |
| 2003 | 6 | 1 | 5 | 0 | 11 | 1 |
| 2004 | 0 | 0 | 3 | 0 | 3 | 0 |
| Total | 256 | 152 | 280 | 85 | 536 | 237 |
| Case Fatality Rate | | 59.4% | | 30.4% | | 44.2% |

Source: California Dept. of Health Services, Office of AIDS, HIV/AIDS Surveillance Report and San Luis Obispo County AIDS Program

# HIV Testing and Seroprevalence

HIV testing in San Luis Obispo County is offered both confidentially and anonymously. Confidential testing requires the testing individual to sign a consent to be tested, and the AIDS Program does not release test information without the written consent of the person receiving the test. Anonymous testing is exactly what the name implies. The person being tested does not reveal their name to anyone, including the AIDS Program. The AIDS Program of San Luis Obispo County offers both confidential and anonymous HIV testing at multiple sites. The sites are listed below, with the types of testing services offered.

Table 4.1
Public Health Department HIV testing sites* by testing option offered

| **Public Health Clinic Sites** | **Confidential Testing Offered** | **Anonymous Testing Offered** |
|---|---|---|
| San Luis Obispo | Yes | Yes |
| Paso Robles | Yes | Yes |
| Morro Bay | Yes | Yes |
| Grover Beach | Yes | Yes |
| SLO County Jail | Yes | No |
| Juvenile Services Center | Yes | No |
| AIDS Program Outreach Van | Yes | Yes |

* HIV/AIDS testing is also offered at private MD offices and clinic sites throughout the County.

During 2002, 2083 total HIV tests were conducted, with a positive test rate of 0.19%. During 2003, a total of 2384 tests were performed, an increase of 14.5%. The positive test rate for 2003 was 0.16%, a decrease in positive test results of 0.03%. The demographic characteristics of those testing positive for HIV vs. those testing positive follows.

***Race***

The ethnic distribution of persons being testing for HIV in San Luis Obispo County is very similar to the overall racial makeup of the County. Table 4.2 shows the racial distribution of persons being tested for HIV in 2003 by the AIDS Program. Notice that the racial demographics of those testing positive differs significantly from those persons being tested.

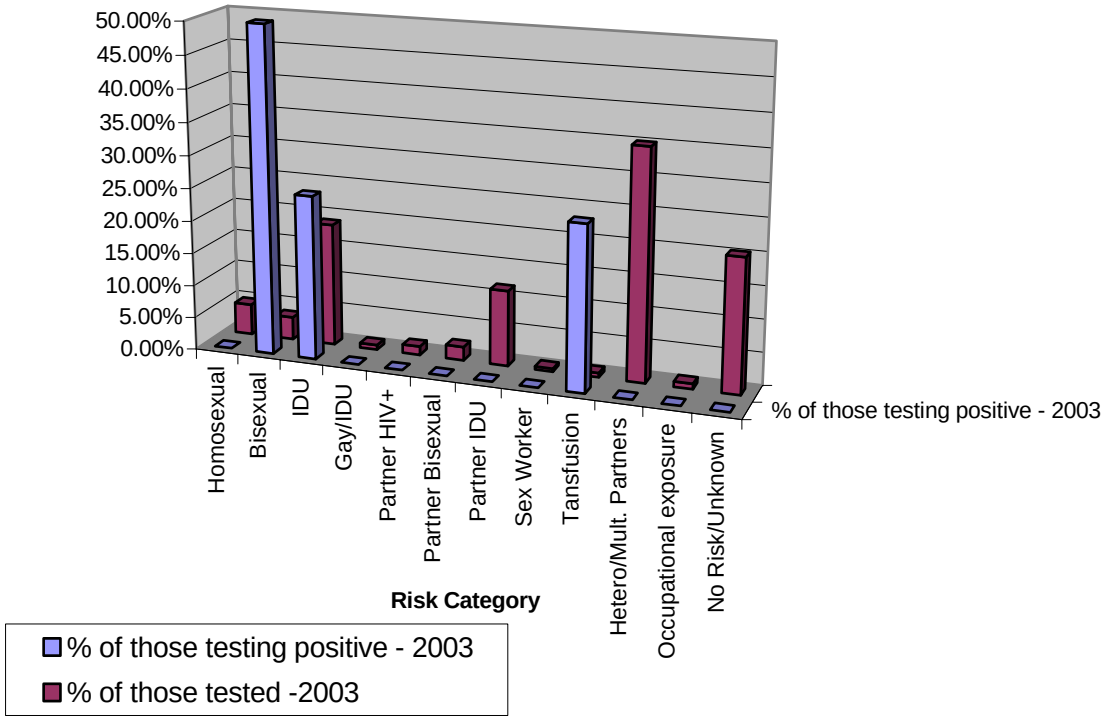
Table 4.2 Racial breakdown of HIV testing for 2002

| RACE | Percent of persons being tested | Percent of persons testing positive |
|---|---|---|
| White | 73.30 | 25.0 |
| Black | 3.12 | 50.0 |
| Hispanic | 15.84 | 25.0 |
| Other | 7.74 | 0.0 |

***Exposure Category***

The most commonly reported risk category for those persons being tested at AIDS Program sites in 2003 was the risk category of "Heterosexual with a history of multiple partners". For those testing positive however, the greatest risk category was "Homosexual", followed by "IDU", and "Heterosexual with multiple partners". Figure 3.1 compares the breakdown of risks for persons being tested vs. those who tested positive for HIV at SLO AIDS program sites for 2003. State statistics were not added to the comparison, as State statistics are compiled by Calendar year, while SLO County statistics are complied by Fiscal year. However, in the calendar year 2003, in the State population, the greatest risk factor for a positive HIV test was MSM, followed by "risk not reported" and "IDU". The low overall percentage of persons who tested positive in SLO (0.16%) seems to suggest that HIV prevalence is fairly low in San Luis Obispo County, although more of the true prevalence of HIV in San Luis Obispo County will be learned in subsequent years as the reporting of HIV infection captures more data. It should be noted that many of those being tested who tested positive were tested in institutions, suggesting a very low community prevalence of HIV infection.

**Figure 3.1**
**HIV testing results by behavior - 2003**



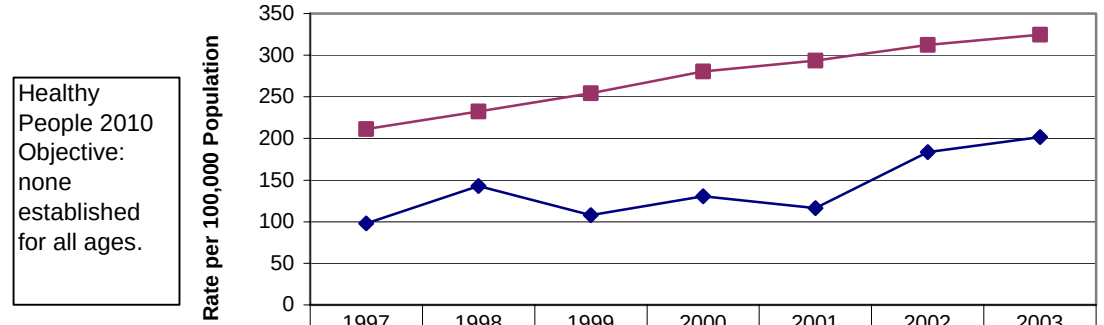
## Sexually Transmitted Diseases as a marker for risky behavior

The spread of Sexually Transmitted Diseases (STD) other than HIV is considered a marker for behavior that can and does spread HIV. Someone diagnosed with a STD has almost certainly had unprotected sex, a risk for contracting HIV. Some STDs can increase the chances of becoming infected with HIV. These STDs, such as syphilis and herpes[4], can cause open sores that give HIV an increased chance of entering the bloodstream. Gonorrhea has been shown to increase viral shedding from HIV infected partners[5], thus increasing the risk of transmission. Monitoring STDs allows the AIDS Program to estimate the prevalence of risky sexual behavior occurring in the population. In California, Chancroid, Chlamydia, Gonorrhea, and Syphilis are all reportable diseases, and statistics are tabulated at both the state and County level. Syphilis has had a recent surge in case numbers among MSM across the United States, and in San Luis Obispo County as well. The primary "epicenters" for the MSM syphilis outbreak are New York, San Francisco and Los Angeles. The location of SLO between two of the major centers for this outbreak increases the chances that SLO will continue to experience an upsurge in Syphilis cases without preventative education and testing. The primary explanation for this increase in Syphilis cases is increased risky sexual contact. The reasons for this include a prevailing belief that there is a "cure" for AIDS, and a decreased sensitivity to safe-sex messages in the MSM community.

In San Luis Obispo, although Chlamydia was the most commonly reported STD, figure 4.1 shows that the rate of Chlamydia infections per 100,000 runs well below the state rate.

**Figure 4-1: Reported Incidence of Chlamydia**

**San Luis Obispo County and California, 1997 - 2003**



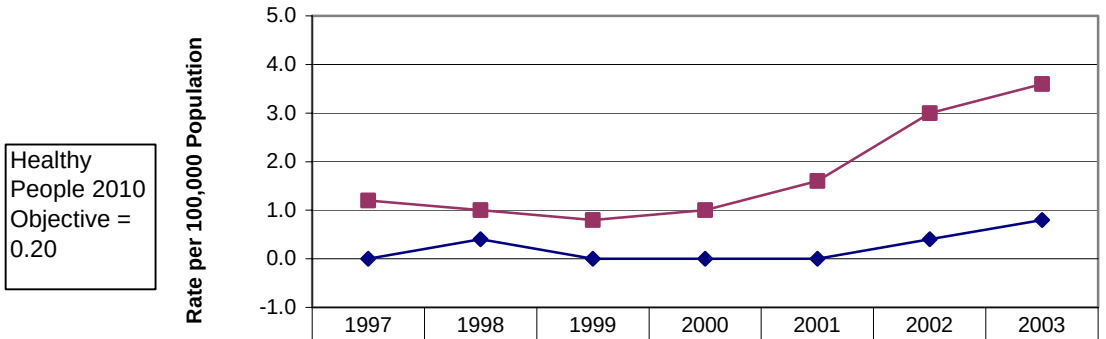

| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|---|---|
| San Luis Obispo County | 97.9 | 143.1 | 107.9 | 130.8 | 116.5 | 183.5 | 201.6 |
| California | 211.4 | 232.5 | 254.4 | 280.5 | 293.6 | 312.3 | 324.8 |

*Data source: State of California, Department of Health Service; Sexually Transmitted Disease Control Branch.*

There has been a generalized trend of increased incidence of syphilis cases in SLO County beginning in 2001, although, once again, the overall incidence is lower than that

of the State of California, as shown in Figure 4.2. These cases have occurred primarily among MSM.

## Figure 4.2: Reported Incidence of Syphilis
### San Luis Obispo County and California, 1997 - 2003

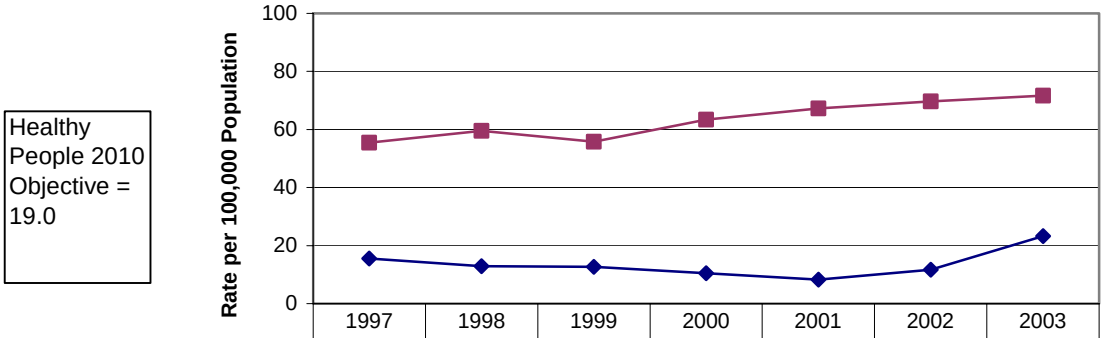



| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|---|---|
| San Luis Obispo County | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 | 0.4 | 0.8 |
| California | 1.2 | 1.0 | 0.8 | 1.0 | 1.6 | 3.0 | 3.6 |

*Data source: State of California, Department of Health Service; Sexually Transmitted Disease Control Branch.*

Gonorrhea rates per 100,000 in San Luis Obispo County are lower than the State average, and had shown a downward trend between the years of 1997-2001. With the upswing in cases since then however, gonorrhea rates are on the rise, both in San Luis Obispo County and California as a whole. As shown in Figure 4.3, gonorrhea rates are now above their low point of 2001.

## Figure 4-3: Reported Incidence of Gonorrhea
### San Luis Obispo County and California, 1997 - 2003




| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|---|---|
| San Luis Obispo County | 15.6 | 12.9 | 12.7 | 10.5 | 8.3 | 11.7 | 23.3 |
| California | 55.5 | 59.5 | 55.8 | 63.4 | 67.2 | 69.7 | 71.7 |

*Data source: State of California, Department of Health Service; Sexually Transmitted Disease Control Branch.*

While the low rates of STDs up until 2001 had suggested a general decline in risky behavior, the figures for 2002 and continuing into 2003 show increases that should be addressed. The rates show the need for education and intervention to prevent these diseases as well as HIV. Because HIV testing data is still preliminary, it is unknown whether these trends are extending to HIV incidence rates. One recent study in San Francisco and Los Angeles[6] however, seems to suggest that the increase in Syphilis rates does not correspond to increases in HIV rates. This data however, is subject to limitations in the study.

## CONCLUSION

HIV and AIDS continue to significantly affect the population of San Luis Obispo County. While the incarcerated population of SLO County accounts for the greatest number and increases in AIDS cases in the County, Community cases are still a major source of concern. Although the exact number of HIV positive individuals or individuals living with AIDS within the County is not known, (persons diagnosed here may move away, while persons diagnosed elsewhere may move here), more information regarding these numbers will continue to illuminate the true burden of HIV in the following years due to the advent of mandatory HIV reporting. While the trend in progression from HIV to AIDS continues to decline, the HIV epidemic is far from over, and in fact could be in danger of increasing its spread through the population as demonstrated by the increases in other STDs, most notably the increase in Syphilis cases among MSM. As the cases of AIDS have declined, the prevalence of HIV in the population is increasing. Recent national studies, as well as increasing rates of other STDs suggest that risky sexual behavior has increased in the population, leading to increased risks of transmission of HIV. Other studies suggest that up to ¾ of HIV infected homosexual and bisexual men are unaware of their HIV infections. These factors, in combination, can easily lead to higher HIV transmission rates, re-igniting a slowing epidemic. According to the Department of Health and Human Services, the lifetime costs of health care associated with HIV, in light of recent advances in diagnostics and therapeutics, is $155,000 or more per person[7]. Thus the cost for every 100 individuals so affected would be $15,500,000. The key is to prevent HIV transmission in individuals, before the tragedy of HIV and AIDS enters their lives. To do this requires constant surveillance, education and prevention efforts.

[1] State of California, Department of Finance, *Total Population, California Counties and Cities.*

[2] *U.S. Census Bureau, Housing and Household Economic Statistics Division, Small Area Estimates Branch* 1999 http://www.census.gov/hhes/www/saipe/estimatetoc.html

[3] California Employment Development Department, Monthly Labor Force Data for Counties, June 2004

[4] TB and HIV infection: Recommendations for the Advisory Committee for the Elimination of TB MMWR 1989,38:236-250

[5] HIV prevention through early detection and treatment of other Sexually Transmitted Diseases –US MMWR 1998;47:2

[6] Trends in Primary and Secondary Syphilis and HIV infections in Men Who Have Sex with Men – San Francisco and Los Angeles, California, 1998-2002 – US MMWR Vol 53, No 26;575 7/09/2004

[7] California Department of Health Services, Office of AIDS, HIV/AIDS Surveillance Report; http:// www.dhs.ca/ps/ooa/Statistics/default.htm